

THE UNITED STATES DISTRICT COURT FOR THE  
NORTHERN DISTRICT OF OKLAHOMA

W. A. DREW EDMONDSON, in his )  
capacity as ATTORNEY GENERAL )  
OF THE STATE OF OKLAHOMA and )  
OKLAHOMA SECRETARY OF THE )  
ENVIRONMENT C. MILES TOLBERT, )  
in his capacity as the )  
TRUSTEE FOR NATURAL RESOURCES )  
FOR THE STATE OF OKLAHOMA, )

Plaintiff, )

vs. )

TYSON FOODS, INC., et al, )

Defendants. )

4:05-CV-00329-TCK-SAJ

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MOTION FOR  
PRELIMINARY INJUNCTION HEARING  
  
BEFORE THE HONORABLE GREGORY FRIZZELL

VOLUME V  
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1 you to address it. I'm not going to make a ruling  
2 on it, but because at least right now, that is on  
3 the forefront of my mind because as I referenced  
4 before, without deciding at this juncture, just to  
5 let everyone know the hills they have to climb, it  
6 seems to me that under RCRA this is likely solid  
7 waste. That's on one side.

01:31PM

8 On the other, in trying to follow the  
9 application of the rules given to me and tested over  
10 time, I don't know that I can give great weight, and  
11 I think that's probably the way that one has to look  
12 at it in terms of a motion for preliminary  
13 injunction. I don't believe it is an exclusionary  
14 device, and if you have any authority, Mr. Jorgensen  
15 or Mr. Bullock in support of what I'm saying. Upon  
16 reflection over the noon hour, in the context of a  
17 motion for preliminary injunction, it goes to the  
18 weight, so Mr. Jorgensen.

01:32PM

01:32PM

19 MR. JORGENSEN: In terms of your question  
20 about authority, in our brief we set out in a  
21 footnote that you're exactly right. In the context  
22 of a bench hearing all of the Daubert standards  
23 apply, but the court can hear it all and then decide  
24 what weight to give it. You don't need to enter a  
25 formal order excluding. You can choose not to rely

01:32PM

01:33PM

1 MR. PAGE: I don't know if that's a fair  
2 assumption, Your Honor, but I will respond.

3 THE COURT: More so than I am.

4 MR. PAGE: One of the first things I need  
5 to correct is this statement by the defendants that 01:43PM  
6 we did not employ a traditional fate and transport  
7 analysis. I think you'll recall that Dr. Olsen put  
8 into -- a placard up in front of you, which I was  
9 examining, talking about the pathway sampling  
10 approach. 01:44PM

11 THE COURT: Right.

12 MR. PAGE: Well, that is just the  
13 explanation of exactly what Dr. Engel told you about  
14 the amount of waste that's being released into the  
15 environment. 01:44PM

16 THE COURT: Otherwise, you wouldn't have  
17 focused on edge of field?

18 MR. PAGE: Exactly. We looked at all of  
19 the different environmental components to see if the  
20 chemicals that are associated with poultry waste are 01:44PM  
21 found in all of those downgradient locations, and  
22 they were found. They were found in all those  
23 locations. So the traditional fate and transport  
24 analysis was performed as part of the weight of  
25 evidence that several of the witnesses talked about. 01:44PM

1 Dr. Teaf and Dr. Olsen, that allowed them to come to  
2 the conclusion that poultry waste is being released.  
3 It contains bacteria, and it's in the recreational  
4 waters and groundwaters of the IRW. So that is  
5 something I think we need to clear up right away,

01:44PM

6 Your Honor. Otherwise, Dr. Fisher's testimony about  
7 the Karst and where waters go and things that are in  
8 the water would make no sense and has no specific  
9 relationship to the other signatures. So I wanted  
10 to clear that up, Your Honor.

01:45PM

11 The other thing, as I prefaced my Daubert  
12 response to Mr. Jorgensen, is that they're saying  
13 that no other scientist has developed the poultry  
14 PCA or the poultry biomarker, but they're not saying  
15 -- and I think this is critical to Daubert. They're  
16 not saying that these very same techniques have been  
17 applied in an environmental context with other  
18 sources, and I think that's very, very important,  
19 Your Honor.

01:45PM

20 THE COURT: I agree. I understand.

01:45PM

21 MR. PAGE: That, I believe, would satisfy  
22 Daubert, and let me explain that just briefly.  
23 First of all, with Dr. Harwood's microbial source  
24 tracking, I think it's important that the court  
25 recognize, at least our recognition, that Dr.

01:46PM

1 Harwood is a leading expert in the field of  
2 microbial source tracking. It's the MST acronym  
3 that's used. It's the area in which PCR, the work  
4 she did laboratory independent method PCR, is one of  
5 several methods that are microbial source tracking.

01:46PM

6 Now, she testified to you, Your Honor, she was  
7 just recently employed by EPA to employ that method  
8 in the Gulf of Mexico, the very same method. Your  
9 Honor, one of defendants' own exhibits, it's  
10 Defendant's Exhibit 271, is an EPA guidance  
11 document. It's called microbial source tracking  
12 guide document. Dr. Harwood is one of the authors.  
13 She's on preface Page 4, and if the court would like  
14 to turn to Section 59, Section 0.3.2, it talks  
15 specifically about the methodology.

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01:47PM

16 THE COURT: That's fine. I recall the  
17 document.

18 MR. PAGE: This particular document  
19 specifically discusses the methodology used by Dr.  
20 Harwood as a method that is commonly used published  
21 by EPA, USGS also, as a method for source tracking.  
22 Now, we're going to be filing a brief with you, Your  
23 Honor, that lays out some of the specific legal  
24 points, but also we wanted to give you the peer  
25 reviewed literature that talks about microbial

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1 source tracking and the same method that Dr. Harwood  
2 did. It has been in peer reviewed literature. It's  
3 been published for swine, cattle, deer and other  
4 species of birds. It's the same exact methodology.

5 We employed that methodology here in the IRW to see  
6 if we could identify a specific genetic piece of  
7 gene from a specific type of bird and see if it's  
8 unique, and we can find it in the environment. So  
9 it was used here for the first time in the IRW.

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10 There has not been a poultry one. If there had been  
11 one, we would have employed that, and so that  
12 methodology now is capable of review by the  
13 defendants. They have our samples of our -- that we  
14 ran the analysis on. They can test it, and I

01:48PM

15 believe, Your Honor, it's very generally accepted  
16 based upon these authorities I mentioned to you. So  
17 they can test the methodology, and they have the  
18 samples, and this methodology has been employed by  
19 the EPA, the USGS and a lot of other scholars who  
20 have used it specifically in environmental context.

01:48PM

21 I think the testimony, Your Honor, just to remind  
22 you, was also that same PCR genetic typing is the  
23 same thing that's used in criminal forensics. It's  
24 like finding the DNA at the crime scene, and also  
25 with hospital analysis for determining the sickness

01:49PM

1 of a patient, and those two specific applications  
2 have been approved by courts, and we'll give you  
3 those citations.

4 THE COURT: And I'm aware of that.

5 Obviously that theorem has been tested numerous  
6 times with regard to crime scene identification.  
7 The questions in my mind are, you know, doesn't it  
8 need to be tested, that that strand of DNA is tested  
9 against other animals, organisms?

01:49PM

10 MR. PAGE: Yes, and it was done in this  
11 case. They took samples of human sewage, cattle,  
12 duck and geese. Now, of the only two samples where  
13 there was some cloning, where they found the same  
14 genetic sequence was one sample of duck, 1 of 20,  
15 one sample of geese, 1 in 20. So if there was a  
16 potential error, it may be 5 percent, but that's  
17 still a very good error rate for this type of  
18 analysis for identification.

01:49PM

19 So I would say, Your Honor, this method can be  
20 tested. It was. It was validated, as Dr. Harwood  
21 pointed out, and that it's generally accepted in the  
22 scientific community. In fact, acknowledged by EPA  
23 as a method, a valid method of determining the  
24 source of contamination.

01:50PM

25 THE COURT: Thank you for educating me. I

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01:50PM

1 think let's go ahead and call our next witness.

2 MR. PAGE: I would just say, Your Honor,  
3 the same arguments are relevant to Dr. Olsen, and if  
4 I could just point out that again it's not unique in  
5 the sense that -- frankly, Your Honor, because I saw  
6 these exhibits, I didn't think the defendants would  
7 be making these arguments, but another of  
8 defendants' exhibits, Defendant's Exhibit  
9 Demonstrative 34, introduction to environmental

01:50PM

10 forensics, Chapter 12, is solely devoted to  
11 principal component analysis and how it's used to  
12 identify sources of contamination in environmental  
13 cases, and I think you may recall some of the cross  
14 examination where Dr. Olsen was cross examined on  
15 whether he followed those procedures that they  
16 mentioned in there, and in each case, he said, yes,  
17 he did follow those procedures. So I would say that  
18 the same analysis is true for the poultry signature,  
19 that it has been well recognized and generally

01:51PM

20 accepted in the scientific community as a means of  
21 sort of tracking, but again, Your Honor, there are  
22 only two of about ten lines of evidence, including  
23 traditional fate and transport, that identify the  
24 land application techniques and disposal by the  
25 defendants with the contaminants we're finding in

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1 the water and groundwater.

2 MR. JORGENSEN: May I briefly respond?

3 THE COURT: Please.

4 MR. JORGENSEN: First, the test both in the

5 Supreme Court and the Tenth Circuit about whether a

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6 new method has been subjected to testing is not your

7 own testing. Whether Mr. Page said it's been

8 substantially tested, he means by his own people,

9 not by the community at large or by other

10 scientists, its level of acceptance in the

01:52PM

11 scientific community. I hope you remember, I could

12 play it for you if you don't, Dr. Harwood's E-mail

13 where she talked about this is novel, ground

14 breaking.

15 THE COURT: Yes.

01:52PM

16 MR. JORGENSEN: On the issue of the alleged

17 signatures about poultry, particularly on chemical,

18 let's start with Mr. Olsen. There is nothing unique

19 about any of those chemicals or bacteria that Dr.

20 Olsen looked at. I mean, he looked at sometimes 19,

01:52PM

21 sometimes as many as 35. He ultimately settled on

22 25. As you'll recall, he went through eight

23 different runs, including bad data that he later

24 admitted was faulty. Good data, every single time

25 came to this conclusion that he admitted on the

01:53PM